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
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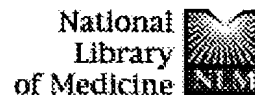
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## New analogs of the immunoregulatory PRP-pentapeptide.

Szewczuk Z, Kubik A, Gocka G, Wieczorek Z, Zimecki M, Janusz M.

Institute of Chemistry, University of Wroclaw, Poland.

To determine the role of consecutive amino acid residues in the immunoreactivity of the shortest active fragment of PRP, a series of analogs substituted by L-alanine in successive positions of the peptide chain was synthesized. The immunological investigations were carried out in several models: the immune response to T-cell dependent antigen, SRBC (in vivo and in vitro) and to T-cell independent antigen, PVP in vitro. The immunotropic action of the peptide was, in addition, verified with respect to thymocytes forming autologous rosettes. The results of these experiments revealed immunotropic activity (in all tests) of the analog containing alanine instead of proline in position 5 of PRP-pentapeptide.

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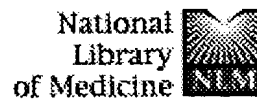
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## Proline-rich polypeptide (PRP)—an immunomodulatory peptide from ovine colostrum.

Janusz M, Lisowski J.

Department of Immunochemistry, Polish Academy of Sciences, Wroclaw.

The structure and properties of a new immunomodulatory peptide isolated from ovine colostrum are described. PRP acts both in vivo and in vitro, and is not species specific. PRP increases permeability of skin vessels, and causes differentiation of murine thymocytes into functionally active T cells. It can simultaneously change surface markers and function of cells. The polypeptide is able to reduce binding of peanut agglutinin (PNA) to PNA+ thymocytes and to increase the binding of PNA to PNA- cells. PRP is also able to transform cortisone-resistant thymocytes into cortisone-sensitive, and vice versa. The observed changes occurred concomitantly, i.e. changes in binding of PNA were accompanied by changes in resistance to cortisone and in expression of helper or suppressor activity. The fact that changes induced by PRP are reversible after the second exposure of the cells to the polypeptide makes it unique among known immunomodulators. An active nonapeptide fragment: Val-Glu-Ser-Tyr-Val-Pro-Leu-Phe-Pro was isolated from the products of PRP digestion. It shows full spectrum of biological activities of PRP. The sequence-Pro-Leu-Phe- is responsible for the immunological effect of the peptide.

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